SUMMARY
OF THE
1985 SURVEY
OF
EDUCATIONAL COMPUTING
IN MANITOBA

EDUCATIONAL TECHNOLOGY PROGRAM
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CONTENTS

	Page
I. EXECUTIVE SUMMARY	1
II. COMPUTER HARDWARE	2
III. COMPUTER STUDIES ENROLLMENT	5
IV. STUDENT-TO-COMPUTER RATIO	8
V. COMMENTS	9
VI. THE 1984-85 SURVEY FORM	10

I. EXECUTIVE SUMMARY

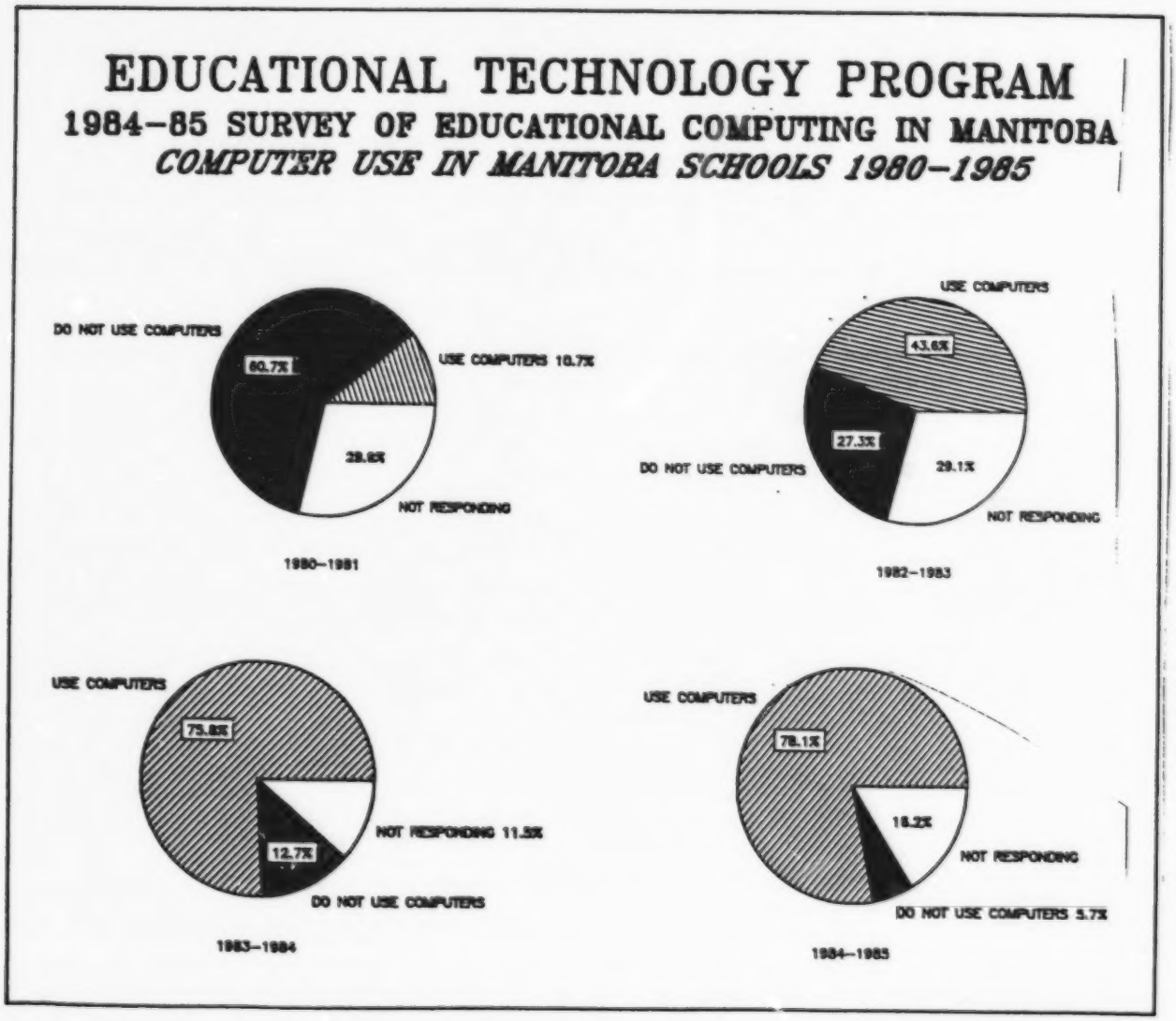
The increase in Manitoba schools acquiring and using computers and offering Computer Studies courses marks the educational community's commitment to providing increased computer access and quality educational computing programmes for Manitoba students.

The Summary of the 1985 Survey of Educational Computing in Manitoba reports on the trends in the acquisition and use of educational technology and highlights the following points:

- over three-quarters of Manitoba schools reported the use of computers in 1985
- over 5,600 computing units were used in Manitoba schools in 1985
- over 50% of all Manitoba schools offer courses in computer studies from K-12
- over 102,000 Manitoba students were exposed to computer studies from K-12
- the student-to-computer ratio for Manitoba schools in 1985 was approximately 36:1

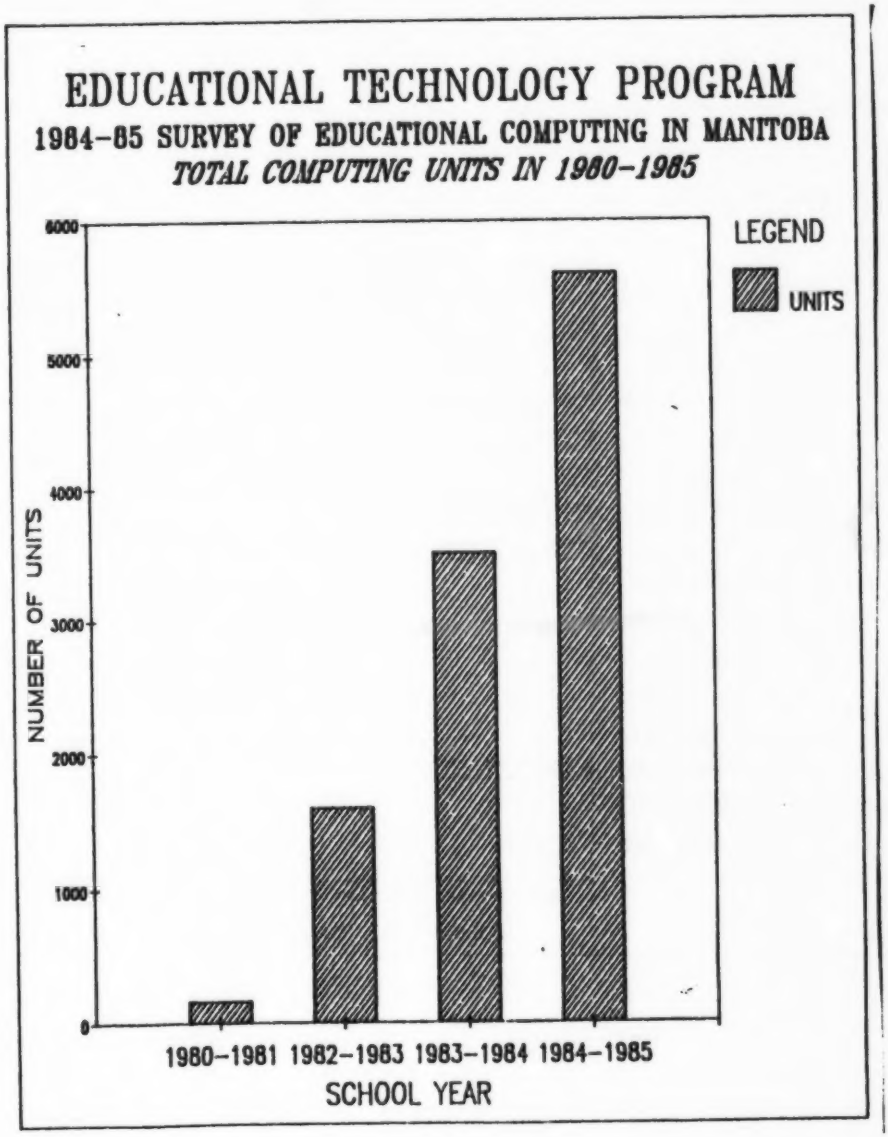
II. COMPUTER HARDWARE

In March, 1985 the Educational Technology Program conducted a survey of all Manitoba schools to determine the status of educational computing in the province. Of schools surveyed, 720 responded as users of computers, 51 responded as not being users, and 89 did not respond. Graph #1 illustrates the growth trend in computer use in Manitoba schools during the period 1980 to 1985.



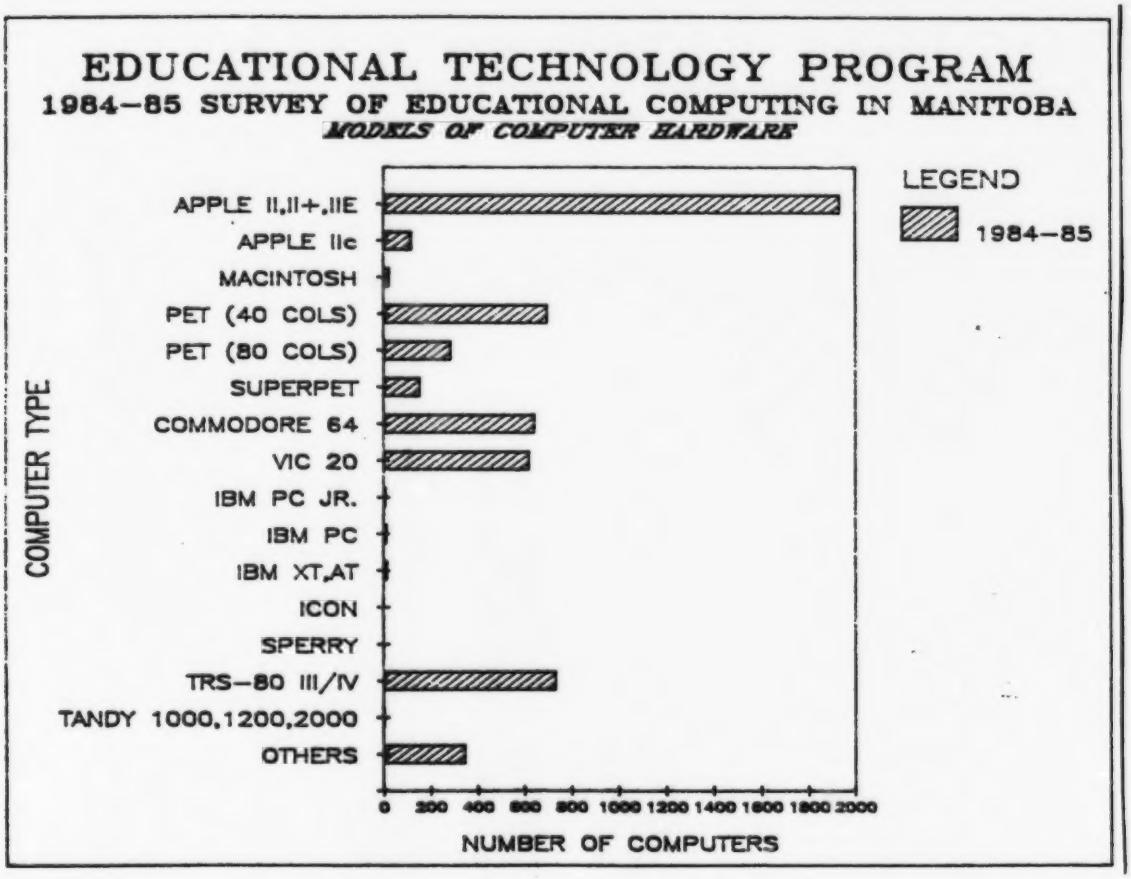
Graph #1

In the present survey, responding schools identified 5,618 microcomputers in the schools. Graph #2 illustrates the rate of growth in total computing units during the period 1980 - 85.



Graph #2

Computing units used in Manitoba schools over the 1984-85 school year were those manufactured by Apple, Commodore, IBM, and Tandy-Radio Shack. Graph #3 illustrates the number of each model of computer used within the Manitoba K-12 school system.

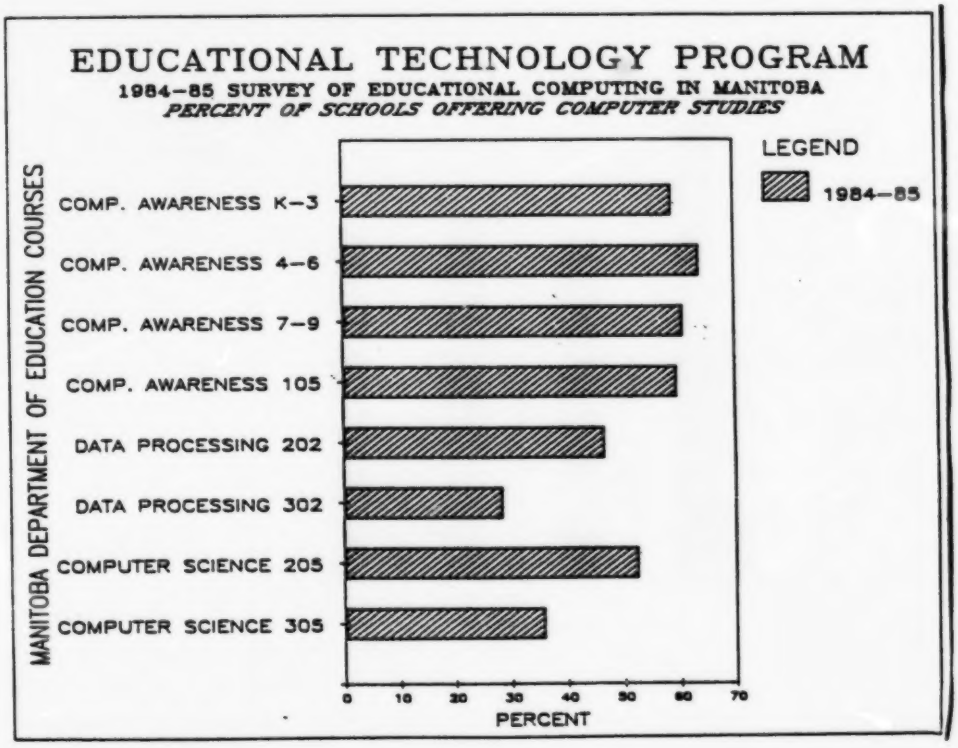


Graph #3

III. COMPUTER STUDIES ENROLLMENT

Manitoba schools acquire computer hardware for both administrative and educational purposes. Presently the priority of Manitoba Education is to encourage the learning and teaching ABOUT computers through the provision of computer studies course guidelines and implementation strategies. At the time of the 1984-85 survey, Computer Studies guidelines were available in interim form for Computer Science 205/305, Computer Awareness 105, Data Processing 202/302, K-3 Computer Awareness and 4-6 Computer Awareness. In addition, a draft pilot guide for 7-9 Computer Awareness was available.

In the 1984-85 school year, of 549 responding schools with primary age students, 329 offered exposure to K-3 Computer Awareness. Of 549 responding schools with intermediate age students, 350 offered 4-6 Computer Awareness. Of 401 responding schools with junior high age students, 245 offered exposure to 7-9 Computer Awareness and of 187 responding schools with senior high age students, 112 offered Computer Awareness 105, 87 offered Data Processing 202/302 and 100 offered Computer Science 205/305, all full-credit courses. Graph #4 illustrates the responding schools offering Computer Studies courses expressed as a percent of those schools with a potential to offer such courses at each grade level.

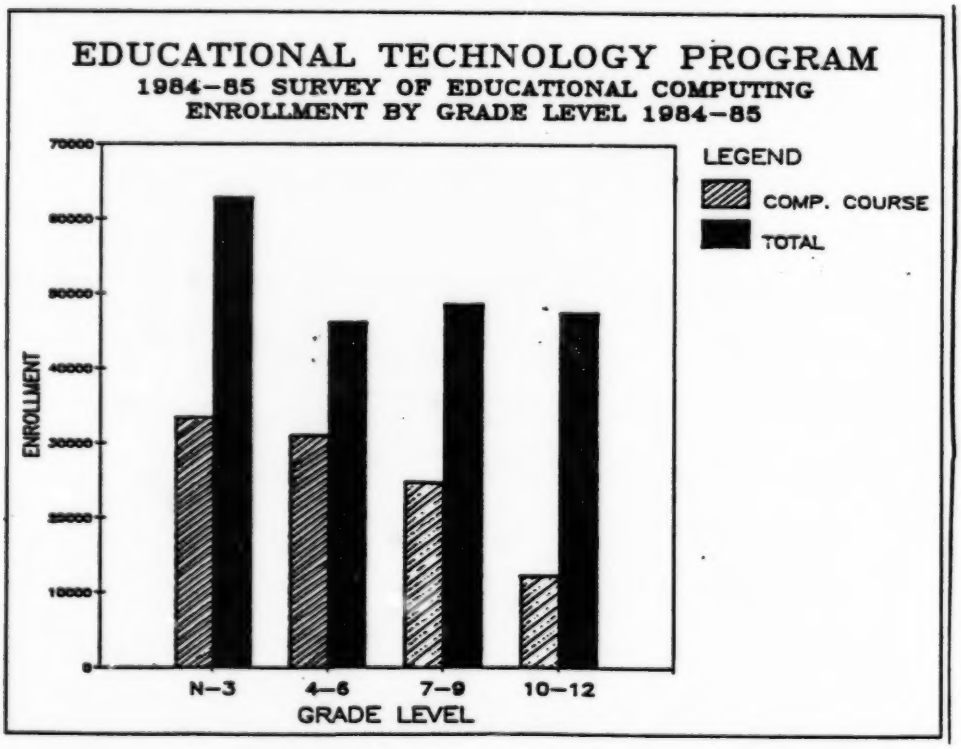


Graph #4

Implementation of Manitoba Education Computer Studies quidelines within schools may be irregular due to the optional nature of the programs. For this reason, in addition to examining school offerings of such courses it is necessary to look at actual student enrollment statistics. In Manitoba, according to responding schools 55% of all primary age students were exposed to K-3 Computer Awareness; of all intermediate age students, 67% were exposed to 4-6 Computer Awareness; and of all junior high age students, 51% were exposed to 7-9 Computer Awareness.

Also, it should be noted that although the 26% of all high school age students enrolled in Computer Studies courses appears lower than the percent at the other three levels, it actually represents a more extensive student and teacher commitment. Each high school Computer Studies course represents 110-120 hours of a student's total school contact time as compared with 10-25 hours per year at K-9 levels.

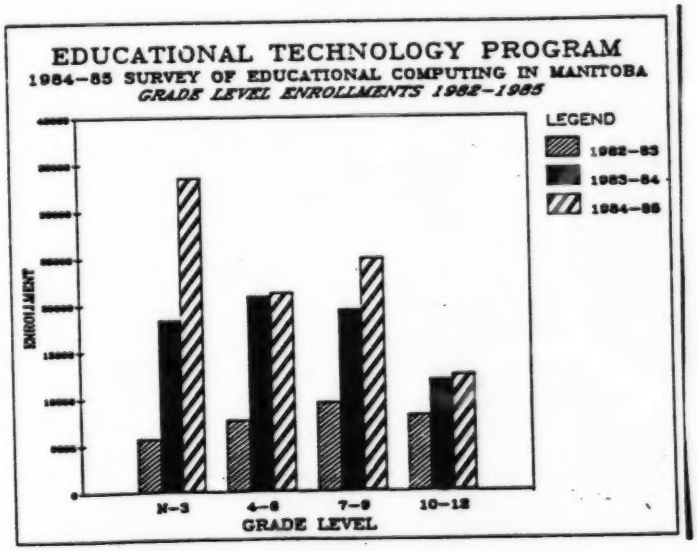
Graph #5 illustrates the number of students enrolled in Computer Studies (102,059) in comparison with the total Manitoba student population at each level.



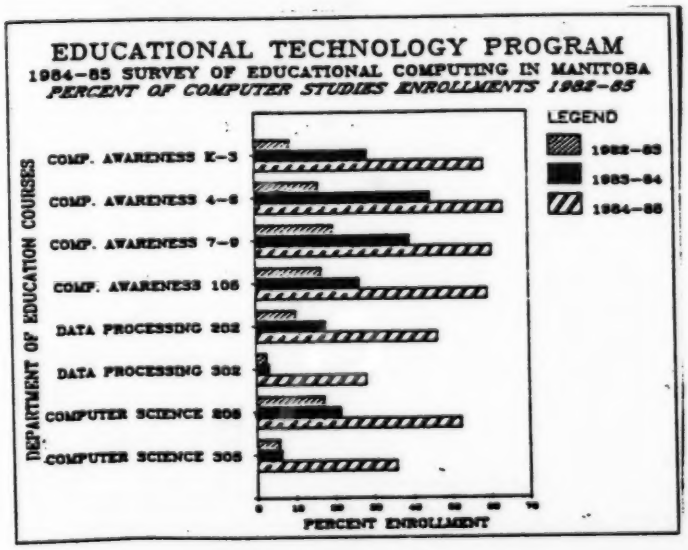
Graph #5

The K-3, 4-6, and 7-9 Computer Awareness programs were in transition from interim status during the 1984-85 school year. The number of students receiving exposure to Computer Awareness at these levels appears significantly higher than the figures for the previous school year 1983-84 when these Manitoba Education guidelines were in pilot status. In future years, the implementation of interim K-9 Computer Awareness guides is expected to result in a further increase in student enrollment figures. The high school enrollment levels have remained quite stable, as many of these Computer Studies programs have been functioning in Manitoba since the early 1970's. However, the progression of students through the K-9 Computer Awareness program can be expected to impact on the high school Computer Studies program in the future. Graph #6 illustrates the growth in student enrollment between 1982-83 and 1984-85. Graph #7 compares 1982-83 with 1983-84 and 1984-85 figures for specific Computer Studies courses.

Graph #6

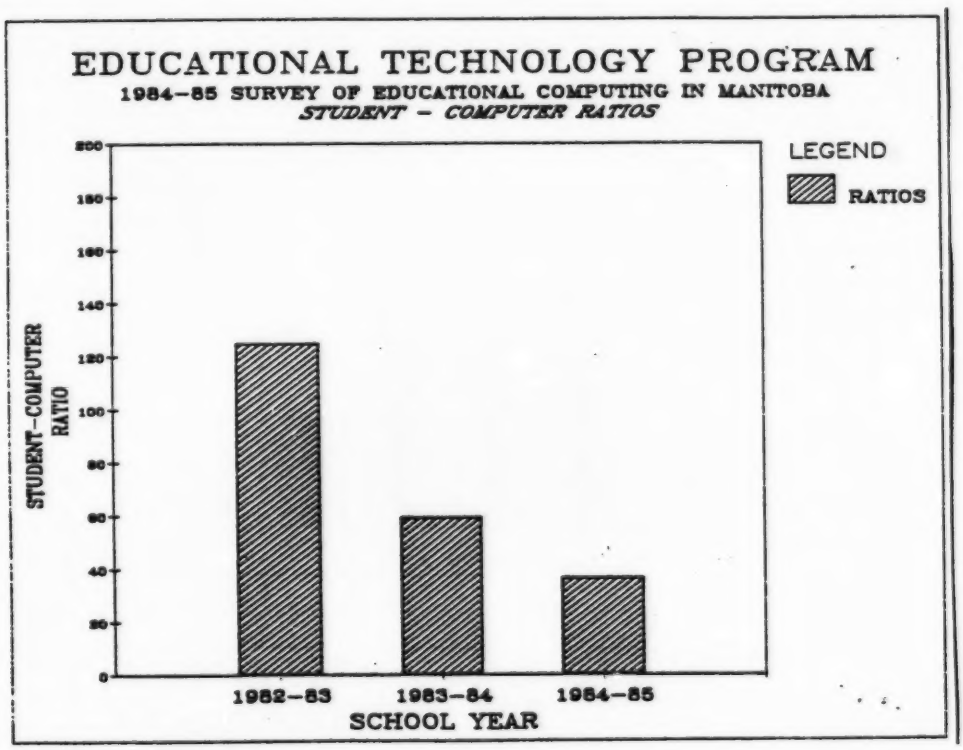


Graph #7



IV. STUDENT-TO-COMPUTER RATIO

At the time of the 1984-85 survey, the Province of Manitoba had approximately 200,000 students and over 5,600 computing units within K-12 schools. Therefore, the overall student to computer ratio is calculated at approximately 36:1. This ratio should not be interpreted to mean that 36 "real" students attempt to share each computer in Manitoba but rather that as an overall statement of computer saturation, the provincial ratio can be expressed in this way. Graph #8 compares the 1984-85 ratio with that of the previous two school years.



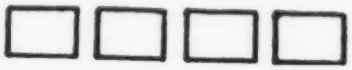
Graph #8

V. COMMENTS

Educators who responded to the 1984-85 survey made comments which were valuable in the planning and execution of educational computing services for 1984-85. These comments were condensed and in most cases fell into one of the following.

SURVEY COMMENTS

- continuing to use the computer for Logo
- beginning to use the computer as a tool for word processing, databases, and spreadsheets
- using computer assisted learning for remediation
- providing computer access as enrichment
- implementing the Manitoba Education Computer Awareness Interim Guides K-9
- finding that lack of keyboarding skills presents a problem to efficient computer use
- communicating through the Manitoba Distributed Network (MDN)
- require more professional development in the application of educational technology
- require more computer hardware and are taking steps to acquire it
- require more good quality courseware integrated with the Manitoba curriculum



SURVEY OF EXISTING SCHOOL COMPUTING 1984-85

SCHOOL: _____

NAME OF COMPUTING CONTACT PERSON IN SCHOOL: _____

1. Are computers being used in your school this year (1984-85)?

   _____ YES - Please continue with question #2

   _____ NO - Please continue with question #5

2. How many and what types of computing hardware are being used in your school this school year (1984-85)? Please specify the NUMBER of ALL computers used in the following grade levels and leave non-applicable categories blank.

	Admin.	GRADE LEVELS K-3	4-6	7-9	10-12	TOTAL #
1. Apple II, II+, IIe						
2. Apple IIc.						
3. Commodore PET 40-Column.						
4. Commodore PET 80-Column.						
5. Commodore SuperPET						
6. Commodore 64						
7. IBM PC, XT, AT						
8. IBM PC jr.						
9. ICON						
10. Sperry						
11. TRS-80						
12. Remote Micro Facility to Mainframe						
13. Other (specify).						

3. Check all places where computers are used in your school:

   School Office _____ Classrooms _____

   Computer Lab _____ Media Centre _____

   Other _____

4. How many and what types of peripheral equipment are being used in your school this year (1984-85)?

	NUMBER	TYPE(S)
Printer(s)	_____	_____
Modem(s)	_____	_____
Network(s)	_____	_____
Other (specify).	_____	_____

5. Please indicate the total number of students you have enrolled during the 1984-85 school year in each of the following courses:

COURSE	ENROLLMENT	COURSE	ENROLLMENT
Computer Awareness K-3	_____	Data Processing 202	_____
Computer Awareness 4-6	_____	Data Processing 302	_____
Computer Awareness 7-9	_____	Computer Science 205	_____
Computer Awareness 105	_____	Computer Science 305	_____
Other (specify)	_____	Other (specify)	_____
_____		_____	

6. Further comments on educational computing:

_____

_____

_____

_____

_____

THANK YOU FOR YOUR COOPERATION

PLEASE return by March 8, 1985 to:

EDUCATIONAL TECHNOLOGY PROGRAM
715-330 Graham Avenue
Winnipeg, Manitoba
R3C 4A5